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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,371	12/28/2004	Hiroshi Mashima	263787US2PCT	6811

22850 7590 07/28/2009  
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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GAMBETTA, KELLY M

ART UNIT	PAPER NUMBER
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1792

NOTIFICATION DATE	DELIVERY MODE
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07/28/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/518,371	<b>Applicant(s)</b> MASHIMA ET AL.	
	<b>Examiner</b> KELLY GAMBETTA	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-8 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 9 July 2009 have been fully considered but they are not persuasive. The applicant argues that the claimed electrode configuration is not taught by the references. However, Ito et al. clearly teaches the claimed electrodes as shown in Figures 2, 3, 5, and 8. Therefore, the previous rejections are maintained.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (EP 1146569) in view of De Francesco.

As to claim 1, Ito et al. teaches a method for PECVD where a discharge electrode and a substrate are parallel to each other in vacuum chamber with a deposition gas for forming a film. High frequency electric power generated by a feeding circuit is fed to feeding points to the discharge electrode through external cables and internal cables corresponding with the external cables to generate plasma. The phases of the high frequency electric power at the feeding points is changed by changing characteristics of the external cables with the power being fed to the feeding points. See paragraphs 0062-0064 and Figures 8-9. Ito et al. teaches the claimed electrodes in Figures 2, 3, 5 and 8. In Figure 2 especially, Ito et al. shows a plurality of parallel longitudinal electrodes and a pair of parallel transverse electrodes opposite the longitudinal electrode. The plurality of feeding points and power supplies with their corresponding cables are discussed above and in paragraphs 0062-0064. Ito et al. includes modifying the external cables, but not the electrical characteristics based on the plasma conditions. De Francesco teaches modifying electrical characteristics of

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similar external coaxial cables based on plasma conditions in order to make more uniform plasma (columns 4-5 lines 38-20, for example). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ito et al. to include modifying electrical characteristics of the external coaxial cables based on plasma conditions as taught by De Francesco in order to make more uniform plasma.

As to claim 3, the electrical characteristics in Ito et al. are changed by changing lengths of the external cables in paragraph 0065, for example. The electrical characteristics are changed by changing lengths of the external cables in De Francesco et al. columns 2-3 lines 50-17.

As to claim 4, the lengths are changed in Ito et al. by detaching connectors (paragraph 0065, for example). In De Francesco, the lengths are changed by changing connectors in columns 2-3 lines 50-17.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. and De Francesco in view of Pote et al. (US 5239134).

Ito et al. and De Francesco include modifying the external cables, but not by adding an insulating material and changing electrical characteristics by changing the dielectric constant of the material. Pote et al. teaches making such a coaxial cable and modifying the dielectric constant so that the phase propagation of the cable, etc. is more easily controllable (abstract). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ito et al. and De Francesco to

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include a cable such as that taught by Pote et al. in order to make a cable in which the phase propagation of the cable, etc. is more easily controllable (abstract).

As to claim 6, the insulating material is that claimed in Pote et al. columns 1 and 2 et seq. for example.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KELLY GAMBETTA whose telephone number is (571)272-2668. The examiner can normally be reached on Monday - Thursday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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